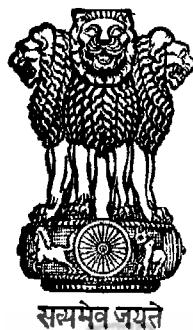


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GOVERNMENT OF INDIA  
MINISTRY OF COMMERCE



REPORT OF THE  
INDIAN TARIFF BOARD  
ON THE  
SODA ASH INDUSTRY

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BOMBAY

1949

BY THE MANAGER OF PUBLICATIONS DELHI  
THE MANAGER GOVERNMENT OF INDIA PRESS SIMLA 1950

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GOVERNMENT OF INDIA.  
MINISTRY OF COMMERCE.  
RESOLUTION

TARIFFS

*New Delhi, the 22nd February, 1950.*

**No. 8(4) T[B]49.**—The Government of India, in the Ministry of Commerce Resolution No. 1-T[A(18)]49, dated May 23, 1949, remitted to the Tariff Board an enquiry into the claim of the soda ash industry for protection. The Board have now submitted their Report embodying in the main the following recommendations:

- (i) Protection should be granted to the soda ash industry for a period of three years, ending March 31, 1953.
- (ii) The present revenue duty on imports of soda ash under item No. 28(4) of the First Schedule to the Indian Customs Tariff at 18 per cent. *ad valorem*, preferential, on supplies from a British Colony, and 30 per cent. *ad valorem*, standard, should be converted respectively into a protective duty of 30 per cent. *ad valorem* preferential on imports from a British Colony and a standard rate to be calculated according to the Indo-British Agreement of 1939.
- (iii) A subsidy of Rs. 1/8/- per cwt. should be granted on the sales of soda ash produced by the Dharangadhra Chemical Works Ltd., Dharangadhra State (Saurashtra) and the Tata's Chemical Works Ltd., Mithapur (Baroda State) after they have restarted operation—the subsidy also to remain in force for a period of three years, ending March 31, 1953.
- (iv) Imports of soda ash should be banned up to December, 1950, except that it might be found necessary to issue licences for imports amounting to some 25,000 tons in the latter half of that year in the light of the conditions then prevailing as regards domestic production and demand.
- (v) Government should devise measures to pool both indigenous and imported soda ash for distribution to consumers.
- (vi) Government should fix the ceiling and floor prices for soda ash.
- (vii) The existing concession of rebate of duty on imported soda ash used by the glass industry should be withdrawn from the date on which the protective duty comes into force.
- (viii) The question of the continuance of the scheme of protective duty-cum-subsidy should be reviewed towards the end of 1950 in the light of changes that might take place in regard to production, demands and imports.
- (ix) The suggestion made by the Tata Chemicals
  - (a) for the construction of a direct railway line from Ranavav to Mithapur along the western coast

- (b) for the linking of Mithapur by road with Jamnagar and Porbander,
- (c) for the making of a road between Mithapur and Port Okha,
- (d) for the construction of an additional berth at Okha Port, should be considered favourably by the appropriate authorities.
- (x) Government and industrialists should give early consideration to the establishment of new factories manufacturing soda ash in other parts of India, in particular in the Central Provinces and South India, in connection with the recommendations of the Panel on the Heavy Chemicals and Electro-Chemical Industries (1944).
- (xi) The indigenous industry which at present exclusively manufactures light ash should also attempt to manufacture the heavy variety, while the industries engaged in the manufacture of glass and silicates which at present use only the heavy type should also undertake the use of light ash.
- (xii) The soda ash industry should take early steps to prescribe a specification for its product in consultation with the Indian Standards Institution.
- (xiii) Indigenous manufacturers should balance the different sections of the soda ash plant and also attempt a reduction in the quantities of ingredients used for every ton of soda ash manufactured.
- (xiv) The manufacturers of soda ash should make specific proposals to the Railway Board on the subject of railway freights and booking facilities.

2. Government accept recommendations (i), (ii) and (iii) subject to the following modifications:—

- (a) In view of the fall in the landed cost of imported soda ash which has occurred since the Tariff Board submitted its Report, the duty on soda ash should be increased to 40 per cent. *ad valorem*, if the manufacture of a British Colony, and 50 per cent., if the manufacture of any other country. A Notification under the Protective Duties Act, 1946, is being issued to impose these duties.
- (b) Government accept the principle of a subsidy. Taking into account the different rate of duty now proposed and other factors, they consider that the subsidy should be of the amount of Re. 1/- per cwt. This will be granted on soda ash produced by the Companies mentioned and sold from the date of this Resolution, provided Government are satisfied that the Companies actually sell the soda ash at the fair selling price recommended by the Tariff Board.

3. Government also accept recommendations (vii), (viii), (x), (xi), (xii), (xiii) and (xiv) and steps will be taken to implement them. The attention of the Industry is invited to these recommendations.

4. As regards recommendation (iv), Government consider that having regard to the actual position of stocks and the demands of industries, imports should be allowed whenever necessary to the extent that demand cannot be met by local supplies.

5. Recommendation (ix) will be borne in mind in any future scheme of development.

6. As regards recommendations (v) and (vi), Government feel these need not be considered in present circumstances.

### ORDER

ORDERED that a copy of this Resolution be communicated to all concerned, and it be published in the Gazette of India.

C. C. DESAI,  
*Secretary to the Government of India.*

### NOTIFICATION

#### TARIFFS

*New Delhi, the 22nd February, 1950.*

**No. 8(4)-T.B[49].**—In exercise of the powers conferred by Sub-Section (i) of Section 2 of the Protective Duties Act, 1946 (XVII of 1946), the Central Government is pleased to impose on soda ash a duty of 22 per cent. *ad valorem*, if the manufacture of a British Colony and a duty of 20 per cent. if the manufacture of any other country, in addition to the duty leviable thereon under item 28(4) of the First Schedule to the Indian Tariff Act, 1934.

C. C. DESAI,  
*Secretary to the Government of India.*

**No. 8(4)-T.B[49].**

Copy to all concerned.

By order, etc.

W. A. ROSE,  
*Under Secretary to the Government of India.*

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## REPORT ON THE SODA ASH INDUSTRY

1. Reference to the Board.—(a) The excessive imports of soda ash during 1948-49 and the consequent fall in the selling prices led to accumulation of large stocks of soda ash with the two producers, namely, the Dhrangadhra Chemical Works, Ltd., Dhrangadhra State (Saurashtra), and the Tata Chemicals, Ltd., Mithapur (Baroda State). Faced with the prospect of shutting down, the representatives of the two factories met the Minister of Commerce and the Minister of Industry and Supply in April, 1949, and asked for Government's assistance in the disposal of their stocks and in restarting production. On 21st April, 1949, the Dhrangadhra Chemical Works, in a letter addressed to the Tariff Board, presented its case for immediate relief; and this letter was forwarded to the Ministry of Commerce for consideration. On 27th April, 1949, the Tata Chemicals also submitted a representation to the Minister for Industry and Supply, explaining in detail the situation arising out of the accumulation of stocks and the consequent closure of the two factories. The Government of India, Ministry of Commerce, thereupon referred to the Tariff Board for investigation the claim of the soda ash industry for protection or assistance in their Resolution No. 1-T.A(18)49, dated 23rd May, 1949, read with paragraphs 2 and 7 of their Resolution No. 218-T(55)45, dated 3rd November, 1945, and paragraph 4 of their Resolution of the same number, dated 16th February, 1946.

(b) Under the terms of reference contained in the Resolution dated 3rd November, 1945, the Board has been asked to report whether the soda ash industry satisfies the following conditions:—

- “(1) that the industry is established and conducted on sound business lines;
- “(2) (a) that, having regard to the natural or economic advantages enjoyed by the industry and its actual or probable costs, it is likely within a reasonable time to develop sufficiently to be able to carry on successfully without protection or State assistance; or
- “(b) that it is an industry to which it is desirable in the national interest to grant protection or assistance and that the probable cost of such protection or assistance to the community is not excessive.”

If the claim for protection or assistance is found to be established, that is, if condition (1) and condition 2(a) or (b) are satisfied, the Board has been asked to recommend—

- “(i) whether, at what rate and in respect of what articles, or class or description of articles, a protective duty should be imposed;
- “(ii) what additional or alternative measures should be taken to protect or assist the industry, and
- “(iii) for what period, not exceeding three years, the tariff or other measures recommended should remain in force.”

Further, in making its recommendations, the Board has been asked to give due weight to the interests of the consumer in the light of the prevailing conditions and also consider how the recommendations affect industries using the articles in respect of which protection is to be granted.

**2. Scope of the inquiry.**—Soda ash at present produced in India is of the light variety. The manufacturers of glass and silicates use heavy ash which is imported. It has been suggested to us that heavy or dense ash can also be manufactured in India with alterations in the existing plant. Apart from this, in the course of our inquiry into the claim for protection or assistance to the glass industry, the representatives of that industry expressed their willingness to use in future indigenous light ash as far as possible. Moreover, the indigenous soda ash industry has to compete with different types of imported ash, namely, synthetic, heavy, medium heavy, light, and Magadi or natural soda ash. This inquiry, therefore, covers all types of soda ash.

**3. Method of inquiry.**—(a) On 7th June, 1949, the Board issued a press communiqué inviting firms, associations and persons interested in this industry or in industries using soda ash, who desired their views to be considered by the Board, to submit their representations. Detailed questionnaires were also issued to all known producers, importers, consumers and associations. A list of those to whom questionnaires were issued and from whom replies or memoranda were received is given in Appendix 1.

(b) Mr. P. V. R. Rao, Cost Accounts Officer attached to the Board, and Mr. S. S. Mehta, the Board's Technical Adviser, visited the Dhrangadhra Chemical Works from 21st to 26th June 1949 and the Tata Chemicals from 4th to 10th July 1949, where cost data were examined. Our Technical Adviser also investigated several technical questions relating to the plant and its working. Mr. G. L. Mehta, President, and Dr. B. V. Narayanaswamy Naidu and Mr. M. E. Rahman, Members of the Board, visited the factory of the Tata Chemicals at Mithapur on 15th and 16th July, 1949. While returning from Mithapur, they also discussed on 17th July, 1949, the present condition and the future prospects of the soda ash industry with His Highness the Rajpramukh of Saurashtra at Junaghar as well as with the Revenue Minister, and the Minister for Industries and Commerce of the Saurashtra Government.

(c) The public inquiry was held on 26th July, 1949, in Bombay at the Board's Office, at which representatives of the producers, importers and consumers as well as representatives of the Ministry of Industry and Supply, Government of India and the Governments of Bombay and Saurashtra, were present. A list of persons who attended the inquiry and who were examined by the Board is given in Appendix II.

**4. History of the industry.**—Although the industry is mainly a wartime development, it may be mentioned that extensive deposits of sodium carbonate occurring in widely separated parts of the country

were exploited during the first world war, and pure sodium carbonate was extracted both in the United Provinces and in Mysore. Deposits of sodium carbonate also occur in the basins of certain lakes in Berar and in Rajputana; similar deposits have been found in certain parts of the country which now form part of Pakistan. When prices fell after the first world war, the methods of extraction employed proved uneconomical. A more promising source of supply was provided by the Shri Shakti Alkali Works established in 1923 by the Dhrangadhra State where soda ash has been manufactured from the abundant supplies of salt in the brine wells of the desert of Cutch, by what is known as the ammonia-soda process. The Works operated on a more or less experimental basis during the first few years. Financial difficulties as well as difficulties in regard to raw materials and the design of the plant compelled the Works to suspend operations early in 1931. The factory resumed operation in 1940 under the name of Dhrangadhra Chemical Works, Ltd. Production was started at that time with the assistance of technical experts from abroad and after introducing large-scale changes in the plant which was designed to produce about 18,000 tons of soda ash per annum. The factory was working until 21st April, 1949, when production had to be stopped because of heavy imports of soda ash at comparatively lower prices which led to accumulation of stocks at the factory. The Tata Chemicals planned the establishment of a large plant in 1939 at Mithapur, with the object of producing various chemicals from salt, such as marine chemicals, electrolytic caustic soda and chlorine, products from chlorine like hydrochloric acid and bleaching powder, as well as soda ash, sodium bicarbonate and caustic soda by the causticisation process. Of these, soda ash was to be the principal item of production. The soda ash plant at Mithapur was started in 1944 with a capacity of 50 tons a day, but it soon met with difficulties in regard to raw materials, design of equipment, and standardisation of the manufacturing process. The plant, therefore, operated at irregular intervals during the three years following its installation, and was occasionally closed down. Continuous operations were resumed towards the end of 1947 after redesigning of the plant in consultation with foreign experts. This factory was in production until 26th April, 1949, when it had also to close down on account of its inability to dispose of its stocks due to heavy imports of soda ash.

**5. Raw materials.**—The main raw materials used in the manufacture of soda ash are salt, limestone, coke and coal, besides small quantities of ammonium sulphate and sodium sulphide. Abundant sources of salt are available at the sites of the two factories. The Dhrangadhra factory manufactures its own salt at Kuda, which is at distance of fourteen miles, from the brine obtained from wells; while the factory at Mithapur produces salt from sea water. The capacity of the two factories to produce salt exceeds their requirements of salt for the soda ash plant, and the surplus salt is disposed of in the market. Limestone is purchased by the Dhrangadhra Works from quarries at Paneli, Dungarpur, Maliya and Savani and carried over a distance of about 200 miles. In the case of the Tata Chemicals, although limestone is available in quarries in the neighbourhood of Mithapur, the firm

purchases better quality of limestone at Ranavav (near Porbundur) which involves transport by rail over a distance of about 270 miles. This limestone can also be carried by sea-cum-rail route, but the cost would be higher. Coal and coke are obtained by both the factories from Bihar and Bengal under monthly allotments made to them by the Coal Commissioner at Calcutta, at prices fixed by Government. A cheaper source of fuel is furnace oil which is also used for part of their production by the Tata Chemicals. Furnace oil is imported via Okha Port, which is situated at a distance of seven miles from Mithapur where the factory is situated. Sulphate of ammonia required by the soda ash factories is obtained either from the Fertilisers and Chemicals, Travancore, Ltd., or from supplies imported through the Imperial Chemical Industries (India), Ltd. The distribution of ammonium sulphate is at present controlled by the Government of India. Sodium sulphide used in the manufacture of soda ash is imported. It may be mentioned that sodium sulphide is produced in the country from sodium sulphate which is obtained from natural sources or as a by-product from the manufacture of nitric acid, hydrochloric acid, and bichromates. The indigenous supply of this material is not sufficient. Besides, imported sodium sulphide is stated to be cheaper. The availability of water in large quantities is also important, since consumption of water is about 15,000/18,000 gallons per ton of soda ash. It is also necessary that the water should be of low hardness and clear from impurities. The Dhrangadhra Works get their water from underground borings, whereas the Tata Chemicals are dependent for their supplies from surface storages. These are not always dependable during periods of drought and, consequently, the Tata Chemicals have obtained their supplies of water from various wells in the surrounding area.

**6. Uses.**—Soda ash, being an important section of the 'alkali' group of the heavy chemical industry, is of such basic importance that the quantum of its consumption is often regarded as a criterion for the industrial development of a country. It forms a raw material for a number of chemical industries, such as caustic soda, sodium bicarbonate, bichromates, besides being used for washing and cleaning. It is also used in several industries such as glass making, silicates, soap and rubber plants, paper, printing inks, boiler compounds, ceramics, paint, textile dyes and leather.

**7. Estimated Indian demand.**—In the memorandum received from the Directorate-General of Industries and Supplies, New Delhi, the present demand for soda ash in the country has been put at 1,20,000 tons a year. The Panel on the Heavy Chemicals and Electro-Chemical Industries, set up by the Department of Planning and Development (1944), estimated the consumption of soda ash by different industries in the country in 1944 to be 1,07,500 tons. The Panel had also envisaged that the consumption of soda ash would be of the order of 2,70,000 tons by 1949. This estimate was for undivided India. In the memorandum furnished by the Council of Scientific and Industrial Research, it is stated that in 1946-47, 85,000 tons of soda ash were used in the country and that, during the five years following that year, the

consumption would be doubled. The I.C.I. (India), Ltd., the largest importers of soda ash in the country, have estimated the present annual demand to be 1,20,000 tons; i.e., the same as that furnished by the D.G., I. & S. On the other hand, according to the manufacturers, the demand for soda ash, so far as the Indian Union is concerned, is about 80,000 tons per annum. These various estimates were discussed at length during the public inquiry. It was pointed out that the partition of the country had not affected the quantum of demand for soda ash to any appreciable extent. It was also stated that, towards the end of the war, an acute shortage of caustic soda in the country led the soap industry to use indigenous soda ash; and that this had accounted for an increase in the consumption of soda ash. As, however, caustic soda has since been made available to the soap industry in sufficient quantities, the demand for soda ash has fallen. It must be emphasised that the large accumulation of stocks at present renders it difficult to arrive at an accurate estimate of the quantum of demand. After examining the question and taking into consideration all the factors, we have come to conclusion that the annual demand for soda ash in the next two or three years should be put at 90,000 tons, of which 50,000 tons will be for heavy ash and 40,000 tons for light ash.

5. **Domestic production.**—(a) The rated capacity of the Dhrangadhra Works is 18,000 tons, while that of the Tata Chemicals' plant at Mithapur is stated to be 28,800 tons per annum. The total installed capacity of the soda ash industry in the country, therefore, may be estimated to be about 46,800 tons per annum. Regular production of soda ash in the country was commenced only since 1940, with the result that a large proportion of the demand had to be met by imports. The following statement furnished by the D.G., I. & S., shows the production of the two soda ash factories during the last nine years:—

Year (July to June)	सन्तान जन्म		The Dhrangadhra Works	The Tata Chemicals	Total
	Tons	Tons			
1940-41	..	..	11,614	..	..
1941-42	..	..	15,520	..	..
1942-43	..	..	17,442	..	..
1943-44	..	..	15,442	..	..
1944-45	..	..	12,062	..	..
1945-46	..	..	14,790	..	..
1946-47	..	..	8,171	..	..
1947-48	..	..	10,980	10,709	21,689
1948 (July to December)	..	..	8,420	8,659	17,089

It will be seen from the above statement that the actual production has been much below the rated capacity. As already stated, because of the heavy imports during 1948-49 with the consequent rapid fall in prices and accumulation of stocks, the Dhrangadhra Works and the Tata Chemicals were compelled to shut down from 21st and 26th April, 1949, respectively. We have, however, been informed that, when the two factories are in full production, the capacity of the plant of the Tata Chemicals can be raised from 80 tons to 150 tons per day; while that of the Dhrangadhra Chemical Works can be increased from 60 tons to 100 tons per day. The indigenous industry can, therefore, be said to be in a position to expand production.

(b) As we have already pointed, the Panel on the Heavy Chemicals and Electro-Chemicals Industries (1944) fixed the target of consumption of soda ash for the subsequent five years at 2,70,000 tons. The figure related to the pre-partition period. The Panel had also recommended the establishment of four new plants in Sind, Bihar, South India, and the Central Provinces. We understand that it is proposed to establish a soda ash plant at Sindri (Bihar) as part of the scheme for the production of fertilisers there. We are of the opinion that the recommendation of the Panel for the establishment of soda ash plants in the other two zones, namely, the Central Provinces and South India, should receive early consideration of Government and industrialists.

**9. Quality of the indigenous soda ash.**—(a) The quality of indigenous light ash has been found to be satisfactory by almost all the interests concerned. The manufacturers of glass and silicates, however, stated that light soda ash was not suitable for their requirements and, consequently, heavy ash had to be imported. Opinion was divided in regard to the suitability of light ash in the manufacture of glass and silicates, and this question was fully discussed at the public inquiry. It was also discussed with representatives of glass manufacturers and technical experts in the course of the public inquiry, held by the Board subsequently, into the claim for protection of the glass industry. We have found that the practice in the United States of America and the United Kingdom is to utilise heavy ash for the glass industry, while the practice on the Continent is to use light ash. The disadvantage in the use of light ash is that in pot melting, it shows greater tendency to foaming and, consequently, lowers the filling capacity of pots. Further, in the recuperative and regenerative furnaces of the glass factories, the losses in the form of dust are greater with light ash, and also the dust tends to clog the recuperative galleries and regenerative chambers. The composition of the melt is also changed because of loss of soda ash in the form of dust. Besides, the handling of light ash presents difficulty in manual mixing as well as automatic feeding. Against these disadvantages, however, must be set the advantages from the point of view of quick melting and the possibilities of overcoming the difficulties in mixing by previous treatment of soda ash with small quantities of water. The table in Appendix IV shows that the c.i.f. price of natural soda ash from Magadi has been, as a rule, lower than the synthetic heavy ash or light ash. In addition, on import into India it bore a preferential

duty of 18 per cent. instead of 30 per cent. which is the rate of duty applicable to imports from countries other than a British Colony. This lower price of the Magadi ash has been one of the main reasons for its wide use in various consuming industries including the glass industry. In our opinion, the utilisation of light ash by the glass and silicates industries is not technically impossible if certain structural alterations in the furnaces and equipment are made. There are, therefore, two possible alternatives, namely, either (i) the conversion of a part of the indigenous production of light ash into the heavy variety by further processing, or (ii) the adaptation of the glass furnaces and equipment to the use of light soda ash. After full discussion of this question at the public inquiries into the soda ash and glass industries, as also into the bichromates industry, and after examining such technical opinion as was available to us, we are of the view that development must take place on both these lines; in other words, that the soda ash industry must take steps to produce the heavy variety of ash, while the glass and other indigenous industries must use such ash as is produced in the country in order to assist the establishment of a basic chemical industry. Further, the glass industry, having itself come up for protection or assistance, has agreed to utilise, as far as possible, indigenous soda ash instead of totally depending on imports for its requirements of this important raw material. It is, therefore, incumbent on the manufacturers of soda ash to seek the co-operation of the glass and silicate industries by fulfilling their requirements and adhering to their standards.

(b) No specification has yet been laid down for the manufacture of soda ash. We recommend that early steps should be taken in this behalf by the industry, in consultation with the Indian Standards Institution.

10. Imports.—(a) A statement showing the quantity and value of imports of soda ash from all countries from 1936-37 to 1948-49, compiled from the Accounts relating to the Sea-borne Trade and Navigation of India, is given in Appendix III. Since regular production of soda ash in the country was undertaken only from 1940, the entire demand before that year was met by imports and, after 1940, an appreciable portion of the demand has also been met by imports. The chief sources of import are the United Kingdom, Magadi in East Africa, the United States of America, Italy, France, and Japan. Before the war, imports of soda ash were of the order of 65,000 tons a year. During the war, imports were restricted owing to a general shortage in the exporting countries and inadequate shipping facilities. At the end of the war, the demand for soda ash increased, and imports were allowed more freely; and since the ruling price of indigenous soda ash was considerably higher than that of the imported soda ash, there were excessive imports far beyond the requirements of the country. For instance, imports in the last pre-war year were 81,000 tons; in 1947-48, they came to 67,940 tons valued at Rs. 1,32,74,958 and rose to the abnormally high figure of 1,62,594 tons in 1948-49 valued at Rs. 5,31,89,000. The I.C.I. (India), Ltd., have also furnished us figures

relating to imports of soda ash by them into India from 1933-34 to 1947-48. These figures show that, in the pre-war years, nearly 75 per cent of the imports of soda ash were of the light variety, while, in the post-war years, imports of light ash were smaller. The firm has also stated that the bulk of the recent heavy imports of soda ash in 1949 has been of the light variety.

(b) The excessive imports during 1948-49 may be explained by several factors. There was a shortage of soda ash in the country which was in keen demand, while domestic production was not adequate. During the ten months from January to October, 1948, licences were freely issued for imports from all sources, namely, dollar, hard currency, sterling and soft currency areas at a c.i.f. value not exceeding Rs. 400 per ton. From 1st November, 1948, to 22nd March, 1949, no licences were issued for imports from dollar and hard currency areas, while imports from sterling and soft currency countries were placed on the Open General Licence. With effect from 21st April, 1949, no licences for imports from any country are to be issued.

(c) According to figures furnished by the D.G. I. & S., the position in regard to stocks of imported soda ash on 8th June, 1949, is as follows:—

	Tons.
Imports during July December, 1948	.. .. 125,000
Imports during January April, 1949	.. .. 37,397
	<hr/> संयमन जनन
	162,397
Indigenous production during the period from July, 1948, to April, 1949	.. .. 28,499
	<hr/> Total
	190,896
Estimated consumption during the period from July 1948, to April, 1949	.. .. 100,000
	<hr/> 90,896
Stocks with indigenous producers	.. .. 17,981
	<hr/> Imported stocks (June, 1949)
	.. .. 72,915

11. Existing rate of customs duty.—(a) Soda ash is assessable to import duty under item 28(4) of the First Schedule to the Indian

Customs Tariff (Thirtieth Issue). The following is an extract from that Schedule:—

Item No.	Name of article	Nature of duty	Standard rate of duty	Preferential rate of duty if the article is the produce or manufacture of			Duration of protective rates of duty
				The United Kingdom	A British Colony	Burma	
28 (4)	<i>Soda ash, including calcined natural soda and manufactured sesqui-carbonates.*</i>	Preferential revenue	30% ad valorem	..	18% ad valorem	6% ad valorem	..
<i>Tariff value—</i>							
Soda ash in bags including calcined natural soda and manufactured sesqui-carbonates—Rs. 12 per cwt.							
<i>N.B.—The tariff value applies to articles packed in containers of no less than 14 lbs.</i>							

\*Under Government of India, Ministry of Finance (Revenue Division), Notification No. 42, Customs, dated the 9th October, 1948, Copperas, green (ferrous sulphate); Soda ash; including calcined natural soda and manufactured sesqui-carbonates; Gypsum; and Ayurvedic drugs and medicines (including those containing spirit) are exempt from the payment of customs duty leviable thereon, provided they are the produce or manufacture of Pakistan and are imported therefrom into any Province of India.

(b) It is necessary to add that the glass industry has been granted a concession of rebate of customs duty on soda ash imported for the manufacture of glass. This concession was given by the Government of India in their Resolution No. 458-T(14), dated 22nd June 1935, on the Tariff Board's Report on the Glass Industry. In that Resolution, after having rejected the Board's recommendation for the grant of protection to the glass industry, Government agreed to a refund to the glass manufacturers of the whole of the customs duty on soda ash imported from the United Kingdom or British Colonies, and of the excess over 10 per cent. *ad valorem* in respect of soda ash imported from other countries. This distinction between goods of the United Kingdom and of non-British origin was apparently based on the margin of preference guaranteed to the United Kingdom in the Ottawa Trade Agreement of 1932. In the Indo-British Trade Agreement of 1939, however, no guaranteed margin of preference was provided for in respect of soda ash imported from the United Kingdom. But, under that Agreement soda ash imported from a British Colony continued to enjoy a preference of 10 per cent. over other countries. In granting the concession to the glass industry in regard to import duty on soda ash, the Government of India have had to modify from time to time the terms of the

concession embodied in their Resolution of 22nd June, 1935. We have ascertained the present position under which, while imports of soda ash from the United Kingdom and all other countries except the British Colonies are assessable at the standard rate of duty, the refund to the glass manufacturers is restricted to an excess over 10 per cent *ad valorem*. In order, however, to maintain the guaranteed margin of preference to the British Colonies under the 1939 Agreement, the refund on soda ash imported from the British Colonies is to the full extent of the customs duty.

**12. C.I.F. prices and landed costs of imported soda ash.**—Information regarding c.i.f. prices and landed costs of imported soda ash for the period from October, 1948, to June, 1949, has been furnished to the Board by the Collectors of Customs at Bombay, Madras and Calcutta. The Imperial Chemical Industries (India), Ltd., Calcutta have also furnished details regarding the present c.i.f. prices of soda ash imported by them. A statement showing these figures as well as those furnished by the Collectors of Customs is given in Appendix IV.

**13. Board's estimate of the cost of production and fair selling price of indigenous soda ash.**—(a) *Method of costing.*—The factory of the Tata Chemicals produces soda ash, salt, caustic soda, chlorine, bleaching powder, hydrochloric acid, zinc chloride, magnesium chloride, magnesium sulphate, bromine and potassium chloride. Detailed cost accounts are maintained which have enabled the Board to work out fairly accurate estimates of the cost of production of soda ash. For the purpose of costing we have selected the periods of the twelve months ending 30th June, 1948, and the eight months ending February, 1949. The products of the Dhrangadhra Chemical Works comprise soda ash, salt, sodium bicarbonate and calcium chloride. Unlike the Tata Chemicals, the Dhrangadhra factory does not maintain detailed cost accounts. The costs had, therefore, to be built up from the financial accounts and other available data. The periods taken for costing were the twelve months ending June, 1948, and the nine months ending March, 1949. Details regarding the block and written-down values of the plant and equipment were not available in respect of both the factories at the time of cost investigation. The Board, therefore, worked out preliminary estimates of the costs of production of soda ash by both the factories. These estimates did not include provisions in respect of interest on working capital, depreciation, and return on block, besides certain other items in respect of which the firms desired to place their views before the Board. Both the firms requested that the details of their costs as worked out by the Board's Cost Accounts Officer and as agreed to by them, should be kept confidential. In accordance with its procedure, therefore, the Board discussed the costs separately with the two firms. The representative of the Dhrangadhra Works agreed that, for determining the Board's estimate of the fair selling price of the indigenous soda ash, the costs of production of the Tata Chemicals (which are lower than those of the Dhrangadhra Chemical Works) could be taken to represent the cost of production and fair selling price of soda ash for the industry as a whole. Hence our fair selling price is based on the cost data obtained from the Tata Chemicals.

(b) *Board's estimate of fair selling price.*—In the light of discussions with the representatives of the industry and the actual costs of production estimated by the Board at the time of cost investigation, our estimate of the fair selling price in respect of the Tata Chemicals for 1949-50 works out to Rs. 336.59 per ton, or Rs. 16.83 per cwt. The details of this estimate are given in the confidential enclosure to this report.\* The detailed Cost Report in respect of both the factories is also being forwarded separately. We explain below the basis of our estimate of the fair selling price of soda ash produced by the Tata Chemicals :—

(i) *Production.*—The production during the year ending June, 1948, and during the period of eight months ending February, 1949, was 10,709 tons and 12,144 tons, respectively. (These figures are nett. i.e., they exclude the quantity of soda ash used in the process). During 1949, the firm has been carrying out certain improvements with a view to increasing production. For the purpose of future costs, therefore we have assumed a production of 80 tons of soda ash per day, or 27,300 tons nett. per annum.

(ii) *Quantities of raw materials.*—In paragraph 14 below, we deal with the economic utilisation of raw materials in the manufacture of soda ash. As will be seen from that paragraph, the quantities of raw materials used per ton of soda ash by the indigenous factories are on the high side. After taking into account various factors such as the quality of the indigenous raw materials, difficulties in handling, lack of trained labour, as well as climatic conditions, we have adopted the following rates of consumption of raw materials for the production of one ton of soda ash : salt 2.10 tons ; limestone 1.75 tons ; coke 0.18 ton ; ammonium sulphate 48 lbs. ; sodium sulphide 21.71 lbs. The costs and prices of raw materials relating to the period subsequent to the period of cost investigation have been determined after taking into account such evidence as was furnished to us by the manufacturers.

(iii) *Power and fuel.*—The expenditure on this account during the period of costing included the amount spent on gas used as fuel. Since then, producer gas has to some extent been replaced by furnace oil. This factor has been taken into account in estimating future costs under this item.

(iv) *Labour and establishment and other overheads.*—The estimated annual expenditure under these heads (based on the actuals for the period of eight months ending February, 1949) has been distributed over the higher future production of 27,300 tons, after allowing for a 15 per cent. increase on account of annual increments and a slight increase in medical expenses and similar items.

(v) *Interest on working capital.*—We have allowed six months' cost of production as working capital and have allowed interest at 4 per cent. per annum on a working capital of Rs. 32 lakhs. This works out to Rs. 4.69 per ton or Re. 0.24 per cwt.

(vi) *Provision for freight differences.*—Both the firms asked for a provision of Rs. 8 per ton in the fair selling price of soda ash on account of the difference between freight upto consuming centres on imported soda ash and freight on indigenous soda ash, on the ground that imported soda ash could be landed at any Indian port without additional expenditure. We have allowed this freight difference which works out to Rs. 0.40 per cwt.

(vii) *Selling and distribution expenses.*—The manufacturers represented that they were at a disadvantage in that the importers had well-established selling organizations, and asked for a provision of Rs. 10 to cover the difference between their own expenditure on commission and discounts and that of the importers. We have allowed Rs. 5 per ton on this account, which is equivalent to Re. 0.25 per cwt.

(viii) *Provision for improvements during shut-down periods.*—A sum of Rs. 9 has been asked for by the industry to cover expenditure on improvements effected during shut-down periods and on minor improvements to be effected during the next twelve months. Although this is not a normal charge, we recognise that, in the peculiar circumstances of the soda ash industry, expenditure on this account would go to increase production so as to reach the maximum of 80 tons per day taken by us in our estimate for future costs. We have, therefore, allowed a sum of Rs. 3 per ton in this behalf, which is equivalent to Re. 0.15 per cwt.

(ix) *Return on block.*—It has been our practice to allow a return on the block at original values, in order to provide for managing agency commission, taxation, dividends to shareholders and reserves. For this purpose, we wanted to ascertain the value of the block relating to soda ash. The Company's balance sheets, however, show the block of the factory as a whole, and the block relating to soda ash is not separately shown. In our opinion, the block pertaining to soda ash should comprise the value of the plant, machinery and buildings of the soda ash department, the proportionate value of the block of service departments, and the proportionate value of the block of certain ancillary departments, such as the salt works. Since the Company maintains its block account in great detail, showing the value of the block at original values in respect of each section of the factory, we have been furnished with a statement of the items making up the block at original values relating to the soda ash plant as on 30th June, 1948. We have examined this statement and consider the figure given by the Company, namely Rs. 126.55 lakhs, as reasonable. We have allowed a return of 8 per cent. on this block of Rs. 126.55 lakhs, which works out to Rs. 10.124 lakhs, which, spread over a production of 27,300 tons of soda ash, amounts to Rs. 37.08 per ton or Rs. 1.85 per cwt.

(x) *Depreciation.*—The accounts of the Company and its income-tax returns give the figures of depreciation for the factory as a whole, and separate figures relating to soda ash are not available. We had, therefore, to adopt an *ad hoc* basis for arriving at a reasonable amount of depreciation of the soda ash plant. The Company contended that depreciation should be allowed on the original value of the block of Rs. 126.55

lakhs referred to above and not on the written-down value, on the ground that the soda ash plant had, until recently, been working intermittently and that the plant had remained idle for long periods. The statement furnished by the Company relating to depreciation at income-tax rates in respect of plant, machinery and buildings making up the block of Rs. 126.55 lakhs showed that the amount of depreciation so far provided worked out to Rs. 15.99 lakhs, i.e., an average rate of about 12½ per cent. We recognise that the plant has been working intermittently and has been operating more or less regularly for about two years only. But we do not agree that on this ground alone, depreciation should be allowed on the original value of the block. We concede, however, that the block should be written down for two years, for which it has worked, at an average rate of 12½ per cent.; and in estimating future costs, we agree to allow depreciation at 12½ per cent. on this written-down value. On this basis, depreciation works out to Rs. 12.11 lakhs which is equivalent to Rs. 44.36 per ton of soda ash or Rs. 2.22 per cwt.

(xi) *Provision for increase in costs of labour and raw materials.*—The Company requested that an allowance should be made in the fair selling price for an increase in labour costs which was expected shortly as a result of an Adjudicator's Award. It also asked for provision in respect of an increase in costs of raw materials. We cannot agree to these provisions which relate to future contingencies.

(xii) *Summary of the estimate of costs and fair selling price.*—We summarise below the various items making up our estimate of the fair-selling price of Rs. 336.59 per ton or Rs. 16.83 per cwt :—

			Rs. per ton	Rs. per cwt.
(1) Cost worked out at the time of cost investigation and agreed to by the firm (i.e., cost of raw materials, power and fuel, labour, repairs and maintenance, consumable stores, establishment, other overheads, packing charges).			234.46	1.72
(2) Depreciation .. .. .. .. ..			44.36	2.22
(3) Interest on working capital .. .. .. .. ..			4.69	0.24
(4) Return on block .. .. .. .. ..			37.08	1.85
(5) Freight difference .. .. .. .. ..			8.00	0.40
(6) Selling and distribution expenses .. .. .. .. ..			5.00	0.25
(7) Provision for improvement during shut-down periods .. .. .. .. ..			3.00	0.15
Total—Fair selling price .. .. .. .. ..				336.59
				16.83

14. *Technical aspects of the industry.*—Before we proceed to a comparison between the Board's estimate of the fair selling price of indigenous soda ash and the landed cost of imported ash, we would like to deal briefly with certain technical aspects of the industry and with some of the factors that tend to enhance the cost of production. The soda ash

industry almost all over the world is operated by a limited number of concerns under strict secrecy of plant design and methods of production. The manufacturers in India were, therefore, placed at a disadvantage as they were unable to avail of technical advice from manufacturers of equipment or from experts in production methods. Consequently, it was after various alterations in the original design and experiments in many directions that the plants could be put into operation. Moreover, various factors have affected the cost of production of soda ash among which may be mentioned (i) location and availability of raw materials ; (ii) utilisation of raw materials, and (iii) balancing of various sections of the plant. We deal with these factors below :—

(a) *Location and availability of raw materials.*—As we have already pointed out in paragraph 5, both the factories are favourably situated in respect of the production of salt. The purity of the salt, however, is not satisfactory in both the factories mainly due to variations in methods of production. The two factories are at a considerable disadvantage in regard to transport of limestone and coal as well as the finished product which has to be carried to markets in the eastern and southern parts of India. The problem of transport is further complicated by the fact that both the plants are located on meter-gauge lines whereas coal and coke come from places which are on broad-gauge lines. We would, therefore, like to reiterate the view expressed by us in paragraph 8(b) that the recommendation of the Panel on the Heavy Chemicals and Electro-Chemicals Industries for the establishment of new plants in other parts of India should receive early consideration of Government and industrialists.

(b) *Utilisation of raw materials.*—The following statement shows the quantities of raw materials required for producing one ton of soda ash according to standards accepted in foreign countries and the quantities consumed by the two indigenous factories for producing the same quantity of soda ash :—

Materials	Standard accepted in foreign countries		Quantities used in Indian factories	
	Under good conditions	Under average conditions	The Ta'a Chemicals	The Dhrangadhra Works
Salt .. .. ..	Ton : 1.5	Tons 1.7 to 1.8	Tons 2.33	Tons 2.03
Limestone .. .. ..	1.20	1.3 to 1.5	2.00	2.53
Coke .. .. ..	0.095	0.10 to 0.11	0.18	0.18
	lbs.	lbs.	lb.	lbs.
Ammonium sulphate .. ..	7	11 to 16.5	2.31	61.00
Sodium sulphid .. ..	4	10	2.71	16.10

It will be seen from the above statement that the quantities of raw materials consumed by the indigenous factories are higher than those accepted under average conditions in foreign countries ; and, after allowing for the additional quantities of raw materials required in Indian conditions, we consider that there is scope for a reduction in the quantities of raw materials consumed at present. We must, however, point out that some of the factors responsible for the higher consumption of raw materials are beyond the control of the manufacturers, such as higher temperature in tropical conditions, poorer quality of the raw materials such as salt, limestone, and coal, and losses in transport and handling, apart from technical handicaps of the industry regarding design of plant and methods of production to which we have already referred. As has been explained in paragraph 13(b)(ii), we have taken these factors into consideration and made necessary allowances for them in our estimates of costs.

(c) *Balancing of the various sections of the plant.*—In view of the integrated nature of the various sections of a soda ash plant and the need for continuous production, it is necessary that the various sections of the plant should each have a balanced capacity so as to secure economic working of the plant as a whole. The investigations by our Technical Adviser show that both the plants are not at present properly balanced ; and this is also recognised by the manufacturers themselves. We recommend that the balancing of the different sections of the soda ash plant should receive the immediate attention of the manufacturers.

15. **Comparison of Board's estimate of fair selling price of indigenous soda ash with the landed cost, ex-duty, of imported soda ash.**—The statement in Appendix IV gives the c.i.f. prices and landed costs of soda ash imported from the United Kingdom, the United States of America, East Africa, France and Italy. We do not consider it necessary to take into account the prices of imports from the United States, because imports from the dollar area are extremely unlikely in the near future. Further, since an appreciable portion of the demand for light ash can be met from indigenous production, the bulk of the imported soda ash should be of the heavy variety. We have ascertained that this heavy ash is mostly imported by the I.C.I. (India), Ltd., and is of the Magadi type from Kenya because of its lower price at the exporting end as well as of the lower rate of import duty, Kenya being a British Colony enjoying a margin of preference of 10 per cent. under the Indo-British Trade Agreement of 1939. The information furnished to us by importers shows that soda ash from the United Kingdom and the United States has been landed during recent months at prices lower than that of the Magadi ash. It is possible that these lower prices are offered because the ruling price of soda ash in these countries is much below that quoted for export ; and such prices cannot be taken as representative of imports over a period of time since they are adjusted according to the position regarding supplies of soda ash in the importing country. This fact is clearly borne out by the trend of c.i.f. prices from November, 1948, to June, 1949, shown in Appendix IV. After discussion with the manufacturers, we have decided to take the recent c.i.f. price of Magadi soda

ash from Kenya, namely Rs. 11.6.9 for the purpose of comparison with our estimate of the fair selling price of the indigenous soda ash, as shown in the following statement :—

	<i>Rs. per cwt.</i>
(1) Board's estimate of fair selling price of indigenous soda ash .. .. ..	16.83
(2) C.i.f. price of imported soda ash ..	11.42
(3) Landing and clearing charges (approximate) .. .. ..	0.50
(4) Landed cost, ex-duty .. .. ..	<u>11.92</u>
(5) Difference between the fair selling price and the landed cost (1—4) .. ..	4.91
(6) Duty required for equating the landed cost with the fair selling price (item 5 as percentage on item 2) .. .. ..	43 per cent.
(7) Existing rate of duty .. .. ..	30 per cent. standard 18 per cent. preferential 6 per cent. Burma

**16. Protection and assistance asked for by the industry.**—The Tata Chemicals have asked for the imposition of a protective duty of 40 per cent. *ad valorem* on imported soda ash. They have also asked for the grant of a bounty of Rs. 2 per cwt. on future production and the sale of the entire stock of soda ash lying with them on 1st July, 1949. Besides, the firm has asked for the regulation of imports so that only such quantities are imported as are required to make up the difference between domestic production and domestic demand. The Dhrangadhra Chemical Works, on the other hand, have asked for a protective duty at a specific rate of Rs. 5 per cwt. on imported ash and the grant of a subsidy to the industry equivalent to the difference between the total duty collected at the specific protective rate of Rs. 5 per cwt. and the total duty collected at the present rate. Subsequently, at the public inquiry, the representatives of the Dhrangadhra Works agreed that any protective duty that might be recommended might be on an *ad valorem* basis. Both the firms have also asked for certain other forms of assistance, such as concessions in railway freight on raw materials and the finished product as well as transport facilities.

**17. Scheme of protection and assistance recommended by the Board.**  
 —(a) *Protective duty.*—It will be seen from the statement in paragraph 15 above that the existing revenue duty is not sufficient to equate the landed cost of the imported soda ash with the fair selling price of the indigenous soda ash. For, while in respect of imports of soda ash from the United Kingdom and non-British territories, the additional duty indicated works out to 13 per cent. in respect of imports from a British Colony, e.g., Magadi ash from East Africa which we have taken for

the purpose of comparison, an addition of 25 per cent. is indicated. We do not consider it desirable to increase the rates of import duty on soda ash to the full extent of the difference indicated above for more than one reason. In the first place, the actual production of the two existing units can meet only a quarter of the total demand for soda ash in the country. Secondly, in spite of a large body of opinion among technical experts in favour of the use of light ash in the glass industry, those units in the glass industry which do not propose or which cannot afford adaptation of their existing plants for utilising light ash are likely to continue using heavy ash. In the third place, any high import duty is likely to be nullified by powerful combines in foreign countries where the current price of soda ash, according to reliable information, ranges between Rs. 5.1-7 and Rs. 5.11-0 per cwt. On the other hand, although Magadi ash is of the heavy variety which is not produced in India, we have taken it as the basis of comparison because it is competitive with indigenous ash and has a low c.i.f. price. We, therefore, recommend that the existing preferential revenue duty of 18 per cent. should be raised to 30 per cent. and made a protective duty. The standard rate should be adjusted in accordance with the terms of the Indo-British Trade Agreement of 1939. We also recommend that the protective duty should be in force for a period of three years, i.e., up to 31st March, 1953.

(b) *Subsidy*.—Since our recommendation in sub-paragraph (a) will still leave a difference of 13 per cent. between the fair selling price of indigenous soda ash and the landed cost, ex-duty, of imported soda ash, we recommend that a subsidy should also be paid to the existing units in the industry equal to this difference in prices, as shown in the following statement :—

*Statement showing the scheme of protecting duty-cum-subsidy.*

*Rs. per cwt.*

(1) Fair selling price estimated by the Board ..	16.83
(2) C.i.f. price .. .. ..	11.42
(3) Landing and clearing charges .. .. ..	0.50
(4) Landed cost, ex-duty (2+3) .. .. ..	11.92
(5) Difference between (1) and (4) .. .. ..	4.91
(6) Duty indicated (percentage of 5 to 2) .. .. ..	43 per cent.
(7) Protective duty at 30 per cent. proposed .. .. ..	3.43
(8) Landed cost with duty (4 & 7) .. .. ..	15.35
(9) Difference between (1) and (8) .. .. ..	1.48
(10) Subsidy proposed .. .. ..	1.50

The subsidy of Rs. 1.5 per cwt. should be payable for the duration of the protective duty on the actual sales of soda ash produced after the two factories restart operations, subject to such conditions as may be prescribed in the light of our recommendations contained in the following sub-paragraphs.

(c) *Maintenance of the ban on imports of soda ash until the end of 1950*.—The statement in paragraph 11(c) shows that at present there

are stocks amounting to about 72,000 tons of imported soda ash in the country. We were informed at the public inquiry that this quantity would be sufficient to meet the demand of the country for the next twelve months. We agree with this view. While recommendations we have made in sub-paragraphs (a) and (b) above are based on the need for the development of this branch of the heavy chemical industry in the country, we would like to emphasise the short term aspect of the relief to be afforded to the soda ash industry. The immediate objective should be to assist the two units to restart normal production as early as possible. We are of the opinion that the only effective way in which this objective can be achieved is to maintain the existing ban on imports of soda ash up to the end of December, 1950. If, however, it is found necessary to issue licences for the import of about 25,000 tons during the latter half of 1950, we recommend that such licences should be issued after full inquiry into the quantum of domestic production and demand. We understand that sufficiently large stocks of heavy ash are lying in the country at present ; and, consequently, we consider that the continuance of the ban on imports up to the end of 1950 will not have any adverse effect on the glass industry. Moreover, at the public inquiry, technical opinion was inclined to favour the use of light ash by the glass industry without adverse effects on its products. So long as the stock of soda ash in the country, together with domestic production, are sufficient to meet domestic demand, we see no reason why valuable foreign exchange should be expended on imports of soda ash. We consider, therefore, that the continuance of the ban on imports of soda as recommended by us will be in accord with Government's policy in regard to imports announced on 16th September, 1949.

(d) *Disposal of stocks : control over the price of soda ash.*—(i) The manufacturers urged that, unless they were able to dispose of at least 50 per cent. of their stocks immediately, it would not be possible for them to restart operations. At a time when there is a paramount need for increasing production all round, it is unfortunate that these two factories should have been compelled to shut down through circumstances beyond their control. A resumption of operations by these factories depends upon the solution of two problems, namely, the disposal of stocks lying with the factories and the orderly liquidation of stocks of imported soda ash. After careful consideration of this question, we have come to the conclusion that effective control over prices and distribution of soda ash at least up to the end of December, 1950, is essential for such disposal of the stocks, both indigenous and imported. We are also of the opinion that till the industry receives a subsidy, Government should fix a ceiling price for soda ash, both indigenous and imported, on the basis of the fair selling price of Rs. 16.83 per cwt. estimated by us in paragraph 14 above. Soda ash is an essential ingredient for several industries as well as for domestic services like laundering and it is necessary that there should be no large increase in its price which would tend to enhance the cost of production in other industries. We have also to point out that there have been wide fluctuations in the price of soda ash in the Indian market as is shown by the fact that it has ranged between Rs. 5-5-4 per cwt. of Magadi ash in January, 1948,

to Rs. 13-0-0 per cwt. in April, 1948 and fell to Rs. 8 in April, 1949 (*vide Appendix V*). On the other hand, prices of soda ash in the domestic markets of the U.K. and the U.S.A. have remained steady throughout these periods. This clearly indicates that the foreign manufacturers adjust their export prices of soda ash, at any rate for the Indian market, in a manner which has proved detrimental at times not merely to the Indian manufacturer of soda ash but also to the consumers. This is, in fact, another reason why this country should develop an efficient soda ash industry. It may be contended that since a ceiling price has been suggested by us, there should also be a floor price so as to prevent unfair and unhealthy competition. So far as imported soda ash is concerned, adequate safeguard against this contingency is ordinarily provided by Section 4(1) of the Indian Tariff Act under which the Board can be approached directly in the event of the landed cost of the imported ash falling below the figure accepted for purposes of comparison with the fair selling price of indigenous ash. The c.i.f. price of Magadi ash which we have taken as the basis is Rs. 11.42 per cwt. We deal in the subsequent sub-paragraph with the question of a floor or minimum price for soda ash. As there are large stocks in the country, prices of soda ash may become unremunerative for the manufacturers through manipulation of prices by large importers. Moreover, since there would be a virtual ban on imports of soda ash if our recommendation is accepted, the safeguard provided in Section 4(1) of the Indian Tariff Act would not be effective in the event of such manipulation taking place. While, therefore, we are not in favour of fixing a floor price in normal circumstances, the risk to the indigenous manufacturers of a deliberate policy of undercutting the prices cannot be overlooked. This can only be obviated by some kind of a pool arrangement which should be arranged at by negotiations between the various interests concerned and with the assistance of Government.

(ii) The question of disposal of existing stocks of soda ash, both indigenous and imported, is of immediate concern to the industry. We have been informed that, before the case of the soda ash industry was referred to the Board, a scheme of pooling under which both indigenous and imported soda ash was to be distributed at controlled prices was discussed between the representatives of the indigenous manufacturers and the I.C.I (India), Ltd., on the one side and the Ministry of Industry and Supply, on the other. No definite conclusions were, so far as we know, reached in the matter. Such a pool would be a short-term expedient in order to dispose of the existing stocks satisfactorily and would be of considerable assistance not only to the indigenous manufacturers but also to the importers. The idea of a pool was also supported by several consuming industries. We suggest that renewed efforts might be made to devise a pooling scheme as a short-term measure for disposal of existing stocks. And we believe that, if Government enforce a ceiling price as suggested by us and fix a floor price in consultation with the manufacturers and the principal importers, such a scheme would be feasible.

(e) *Review of the sales subsidy recommended in sub-paragraph (b).*—  
The effects of the protective duty recommended by us in sub-paragraph

(e) will begin to be felt only from the beginning of 1951, when we do not envisage control over imports. The reason why we have recommended a subsidy also is that the rate of protective duty recommended by us leaves a margin in favour of the imported ash so that the indigenous industry will be placed on an equal footing without, at the same time, increasing the cost of production in industries using soda ash as a raw material. We have recommended the payment of this sales subsidy on new production for the duration of the protective duty, i.e., for period of three years. But it is probable that conditions may change after 1950, and we therefore, recommend that the whole question should be reviewed by the Tariff Board in the last quarter of 1950.

(f) *Withdrawal of the concession of rebate of customs duty on imported soda ash used by the glass industry.*—In paragraph 11(b), we have stated the present position in regard to the concession granted to the glass industry of rebate of customs duty on imported soda ash used by that industry. In the course of our inquiry into the claim for protection or assistance to the glass industry held on 23rd, 24th and 25th August, 1949, representatives of glass manufacturers recognised that it would be in their own ultimate interest to develop the soda ash industry so as to make the country independent of imports of an important raw material required by the glass as well as other industries ; and they agreed that the glass industry was prepared to forego the existing concession of rebate of customs duty on soda ash. Apart from this helpful attitude on the part of the glass industry, the circumstances in which this concession was granted in 1935 have changed, especially as soda ash is now being manufactured in the country which was not the case then. We, therefore, recommend that, if our recommendation regarding the grant of protection and assistance to the soda ash industry is accepted by the Government of India, the existing concession of rebate of duty on imported soda ash used in the glass industry should be withdrawn with effect from the date on which the protective duty on soda ash comes into force.

18. **Eligibility for protection.**—So far as the first condition to be fulfilled by the industry for the grant of protection or assistance is concerned, we are satisfied that the industry is run on sound business lines. All the chief raw materials required by the industry are available within the country. There is also a large home market for soda ash, and this market is bound to increase as industrial development proceeds. We are, therefore, satisfied that the industry possesses natural advantages which will enable it to reduce costs and develop sufficiently within a reasonable time for carrying on successfully without protection or State assistance. We may also add that both Tata Chemicals and Dhrangadhra Works are planning to increase their production at an early date by the installation of additional machinery. Their production is ultimately expected to rise to 150 tons and 100 tons per day, respectively. We consider that the cost of production of soda ash is likely to be reduced considerably as production is stepped up. Further, soda ash, being an important branch of the alkali group of the heavy chemical industry, falls under the category of basic industries of importance specified in paragraph 7 of the Government of India's statement on Industrial Policy issued on April 8, 1948,

namely, industries the planning and regulation of which by the Central Government is necessary in the national interest, and whose location must be governed by economic factors of all-India import, or which require considerable investment or a high degree of technical skill. There can, therefore, be no question of the soda ash industry fulfilling condition 2(b), namely, that it is an industry to which it is desirable in the national interest to grant protection or assistance. As regards the condition whether the probable cost of such protection or assistance to the community is not excessive, it may be stated that at present, the largest consumption of soda ash is for washing and cleaning purposes, and the incidence of its cost in such uses is almost negligible. The other important industries using soda ash are silicates, glass and bichromates. We have examined the incidence of the cost of soda ash in the cost of production of finished articles in these industries and have come to the conclusion that the protective duty on soda ash at the rates recommended by us will not involve any appreciable burden on consuming industries and services.

19. *Subsidiary recommendations.*—(a) *Concessions in regard to railway freight and facilities for booking.*—Both the firms have complained of increases which have taken place in railway freight rates on raw materials and finished articles and have asked for the restoration of concessional rates which used to be offered to them prior to the war. They have also stated that raw materials and finished products required to be moved by rail should be accepted for booking at the nearest convenient station. We suggest that the manufacturers should formulate specific proposals in this connection and place them before the Railway Board for examination.

(b) *New road and railway connections.*—As pointed out in paragraph 5, the Tata Chemicals have to transport their requirements of limestone from Ranavav to Mithapur over a distance of 270 miles *via* Rajkot; whereas the direct rail route, if one was constructed, would be only 85 miles between these two places. The firm has, therefore, suggested the construction of such a direct railway line along the western Coast. The Tata Chemicals have also suggested that Mithapur might be connected by road with Jamnagar and Porbunder to facilitate the movement by road of raw materials and finished products. They have also stressed the need for a good road between Mithapur and Port Okha and the provision of an additional berth at Okha Port. These facilities are essential for the industry. We recommend that these various suggestions should be considered favourably by the appropriate authorities.

20. *Summary of conclusions and recommendations.*—Our conclusions and recommendations may be summarised as under:—

(1) Regular production of soda ash in the country was undertaken by the Dhrangadhra Chemical Works, Dhrangadhra (Saurashtra), from 1940-41 and by the Tata Chemicals, Mithapur (Baroda) from 1947-48. (Paragraph 4).

(2) The two factories were compelled to close down in April, 1949, because of their inability to dispose of their stock due to excessive imports of soda ash during 1948-49 and the consequent fall in the selling prices. (Paragraph 4).

(3) The annual demand for soda ash in the country is 90,000 tons, of which 50,000 tons will be for heavy ash and 40,000 tons for light ash. (Paragraph 7).

(4) The present installed capacity of the two units of the soda ash industry in the country is about 46,800 tons per annum. The actual production during 1947-48 was 21,689 tons, and, during the six months from July to December, 1948, 17,088 tons. As soon as the two factories are enabled to restart production, their capacity can be expanded. [Paragraph 8(a)].

(5) Having regard to the proposal to establish a soda ash plant at Sindri (Bihar) as part of the scheme for the production of fertiliser there, the recommendations of the Panel on the Heavy Chemicals and Electro-Chemical Industries (1944) for the establishment of new soda ash plants in the other two zones, namely, the Central Provinces and South India, should receive early consideration of Government and industrialists. [Paragraph 8(b)].

(6) The quality of the indigenous light ash has been found to be satisfactory. The manufacturers of glass and silicates, however, prefer heavy ash which is imported, chiefly from Magadi in East Africa, the reasons for such preference being that Magadi ash being natural ash is cheaper and that imports from Magadi bear a preferential duty of 18 per cent against the standard rate of 30 per cent. In view of the fact that the utilisation of light ash by the glass and silicates industries is not technically impossible with certain structural alterations in the furnaces and equipment, the glass and other indigenous industries must use such ash as is produced in the country. At the same time, the soda ash industry must take steps to produce the heavy variety of ash and seek the co-operation of other industries by fulfilling their requirements and adhering to their standards. [Paragraph 9(a)].

(7) The soda ash industry must take early steps to prescribe a specification for its product in consultation with the Indian Standards Institution. [Paragraph 9(b)].

(8) The fair selling price of the indigenous soda ash for 1949-50 is Rs. 16.82 per cwt., as compared with the latest landed cost, ex-duty, of imported Magadi soda ash of Rs. 11.92 per cwt. Thus the duty required for equating the landed cost with the fair selling price works out to 43 per cent as against the existing duty at a standard rate of 30 per cent. on imports from the United Kingdom and non-British territories, a preferential rate of 18 per cent on imports from a British Colony, and 6 per cent. on imports from Burma. (Paragraphs 13 and 15).

(9) The chief factors which tend to increase the cost of production of soda ash in the country are: (i) the two factories, although favourably situated in respect of the production of salt, are at a considerable disadvantage in regard to transport of limestone and coal as well as the transport of finished product which has to be carried to markets in the eastern and southern parts of India ; (ii) the quantities of raw materials used by these factories are higher than those accepted under average conditions in foreign countries ; and (iii) the various sections of the soda ash plant in both the factories are not properly balanced at present so as to secure

continuous and, therefore, economic working of the plant as a whole. [Paragraph 14].

(10) The fact that the two soda ash factories are unfavourably situated from the point of view of transport of raw materials such as limestone and coal and of finished product emphasises early consideration being given by Government and industrialists to the proposal for the establishment of new units in the other parts of India. [Paragraph 14(a)].

(11) After making allowance for the additional quantities of raw materials required under Indian conditions, there is scope for a reduction in the present rates of consumption of raw materials used for the production of every ton of soda ash. [Paragraph 14(b)].

(12) The balancing of the different sections of the soda ash plant should receive the immediate attention of the manufacturers. [Paragraph 14(c)].

(13) The existing units of the soda ash industry deserve the grant of protection and assistance for a period of three years in the first instance. In order that such protection and assistance may not entail an undue burden on the consuming industries, the relief to be afforded to the soda ash industry should be given in the following forms :—

(a) The existing preferential revenue duty of 18 per cent should be raised to 30 per cent. and made a protective duty, the standard rate being adjusted in accordance with the terms of the Indo-British Trade Agreement of 1939. The protective duty at the rates specified should be in force for a period of three years, i.e., up to 31st March, 1953. [Paragraph 17(a)].

(b) The landed cost, without duty, of imported soda ash (Rs. 11.92 per cwt.) and the protective duty of 30 per cent recommended by the Board (Rs. 3.43 per cwt.) will bring the landed cost, with duty, of imported soda ash to Rs. 15.35 per cwt., thus indicating a difference of about Rs. 1.5 per cwt. between the Board's estimate of the fair selling price of indigenous soda ash (Rs. 16.83 per cwt.) and the landed cost with duty (Rs. 15.35 per cwt.). This difference of Rs. 1.5 per cwt. should be made good to the industry by way of a subsidy on the sales of soda ash produced by the two factories after they have restarted operations. This subsidy should be payable for the period during which the protective duty is in force, i.e., up to 31st March, 1953. [Paragraph 17(b)].

(c) In view of the fact that imported stocks of soda ash at present in the country are of the order of 72,000 tons, the only effective way of enabling the two soda ash units to restart production at an early date is to maintain the existing ban on imports of soda ash up to the end of December, 1950, except that it might be found necessary to issue licences for the import of about 25,000 tons in the latter half of 1950 in the light of the then prevailing conditions in regard to domestic production and domestic demand. Such restriction of imports will also be in accord with Government's policy in regard to imports announced on 16th September, 1949. [Paragraph 17(c)].

(d) The orderly disposal of the stocks of imported soda ash as well as the stocks lying with the factories is essential for the resumption of operations by the two factories. Such disposal will be made possible only through effective control over prices and distribution of soda ash until such time as the two factories are able to resume operation and avail themselves of the benefit of subsidy payable on sales of new production of soda ash. During the period of control, the ceiling price for soda ash, both indigenous and imported, should be based on Rs. 16.83 per cwt., i.e., the fair selling price of indigenous soda ash estimated by the Board. To avoid the risk of an increase in price to the disadvantage of the consumer because of the ban on imports recommended by us, as also undercutting of prices by importers in view of the low landed cost of imported soda ash, particularly of the Magadi variety, we recommend that efforts should be made to devise a pool arrangement as a short-term measure under which both indigenous and imported soda ash would be distributed within the limits of such floor and ceiling prices as may be determined by negotiations between the various interests concerned and with the assistance of Government. [Paragraph 17(d)].

(e) The question of the continuance of the scheme of protective duty-cum-subsidy should be reviewed towards the end of 1950 in the light of changes that might take place in regard to demand and imports. [Paragraph 17 (e)].

(f) The existing concession of rebate of customs duty on imported soda ash used by the glass industry should be withdrawn with effect from the date on which the protective duty on soda ash comes into force. [Paragraphs 17(f)].

(14) The soda ash industry satisfies the conditions for the grant of protection or assistance laid down in Government's Resolution No. 218-T (55) of 15, dated 3rd November, 1945. (Paragraph 18).

(15) The manufacturers should make specific proposals in regard to their demand for concessional railway freight rates and booking facilities and place them before the Railway Board for examination. [Paragraph 19(a)].

(16) The suggestions made by the Tata Chemicals (i) for the construction of a direct railway line from Ranavav to Mithapur along the Western Coast, (ii) for the linking of Mithapur by road with Jamnagar and Porbander, (iii) for the provision of a road between Mithapur and Okha Port, and (iv) for the construction of an additional berth at Okha Port should be considered favourably by the appropriate authorities. [Paragraph 19(b)].

**21. Acknowledgments.**—We are grateful to Mr. Manubhai M. Shah, Minister for Industries and Commerce, Government of the United States of Saurashtra, who was present at the public inquiry and assisted us in our deliberations. Our thanks are also due to the representatives of the industry for their co-operation in our investigation. We should also like to express our thanks to Mr. N. G. Mitra, Deputy Development Officer, Directorate-General of Industries and Supplies, Government of India, New Delhi, for his valuable help in our inquiry. We have also to thank Mr. P. V. R. Rao, Cost Accounts Officer attached to the Board, and Mr. S. S. Mehta, our Technical Adviser, for their assistance at various stages of the inquiry.

G. L. MEHTA—President.

B. V. NARAYANASWAMY—Member.

M. E. REHMAN—Member.

R. DORAISWAMY—Secretary.

*Bombay, 26th September, 1949.*



## APPENDIX I [vide paragraph 3(a)]

*List of firms, associations and persons, to whom questionnaires were issued and from whom replies or memoranda were received.*

(\*Those who have replied).

*Producers.*

- \*1. Dhrangadhra Chemical Works Ltd., Dhrangadhra (Saurashtra).
- \*2. Tata Chemicals Ltd., Bombay House, Bruce Street, Bombay.

*Importers.*

- 1. Association of British Chemical Manufactureres, Janmabhoomi Chambers, Fort St., Bombay.
- 2. Chamber of Commerce, P.B. No. 473, Bombay.
- 3. Chudgor and Co., 34-38 Daryasthan St., Vadgadi, Bombay.
- 4. General Mill Stores Co. Ltd., Ali Chambers, Tamarind Lane, Bombay.
- \*5. Imperial Chemical Industries (India) Ltd., 18, Strand Road, Calcutta.
- \*6. Indian Commercial Co. Ltd., 45-47, Appollo St., Bombay.
- 7. Industrial Engineering Co., 45-47, Appollo St., Bombay.
- 8. Khandalval Chemical Colours Ltd., 317, Samuel Street, Vadgadi, Bombay.
- 9. Nanavati & Co., 16, Appollo St., Fort, Bombay.
- 10. New Standard Chemical Co. Ltd., 28, Samuel St., Vadgadi, Bombay.
- 11. Star Metal Refinery, 361, Hornby Road, Bombay.
- 12. Universal Commercial Corporation, 52, Hormusjee St., Colaba, Bombay.
- \*13. Volkart Brothers, Graham Road, Ballard Estate, Bombay.

*Consumers*

- \*1. All India Glass Manufacturers' Federation, Plaza Cinema, Connaught Circus, New Delhi.
- \*2. Ahmedabad Millowners' Association, Lal Darwaja, Ahmedabad.
- 3. Association of British Chemical Manufacturers, Janmabhoomi Chambers, Fort St., Bombay.
- \*4 Bengal Chemical & Pharmaceutical Works Ltd., 14, Maniktola Main Road, Calcutta.
- \*5. Bombay Dyeing & Mfg. Co. Ltd., Neville House, Ballard Estate, Bombay.
- \*6. Cawnpore Chemical Works Ltd., Kanpur.
- \*7. Calico Mills Ltd., Ahmedabad.
- 8. Chamber of Commerce, P.B. No. 473, Bombay.
- \*9. Director General of Ordnance Factories, Calcutta.
- \*10. Delhi Glass Works, P.O. Malaknagar, Ghaziabad, U.P.
- \*11. Deccan Paper Mills, Laxmi Road, Poona.
- 12. Desai & Co., Gondal Road, Rajkot.
- 13. Dharamsi Morarji Chemical Co. Ltd., 317-321, Hornby Road, Bombay.

14. Diamond Jubilee Washing Co., Hanam St., Fort, Bombay.
- \*15. Government Dichromate Factory, Belagula (Mysore State).
- \*16. Gujarat Paper Mills Ltd., 653, Sakar Bazar, Railwaypura, P. O., Ahmedabad 2.
- \*17. Garment Cleaning Works, Gowalia Tank Road, Bombay.
- \*18. Hindustan Chemical Works Ltd., Advani Chambers, Sir P.M. Road, Bombay.
- \*19. Indian Paper Mills Association, 23-B, Netaji Subhas Road, Calcutta.
20. Indian Enamel Works Ltd., Kasturenand Mills Compound, Tulsi Pipe Road, Dadar, Bombay.
- \*21. Khatau Makanji Spg. & Wvg. Co. Ltd., Laxmi Building, Ballard Estate, Bombay.
- \*22. Kesar Sugar Works Ltd., 45-47, Apollo St., Fort, Bombay.
- \*23. Leach & Weborny, Hanam St., Fort, Bombay.
- \*24. Mysore Glass & Enamel Works Ltd., 34, Gandhinagar, Bangalore City.
25. Morarjee Gokuldas Spg. & Wvg. Co. Ltd., Sopari Baug Road, Parel, Bombay.
26. Millowners' Association, Elphinstone Building, Churchgate St., Bombay.
- \*27. Modern Commercial Syndicate, Lashkar (Gwalior).
- \*28. Mira Chemical Works, Chinchpokly Road, Bombay.
- 29.浦杜米纸厂有限公司, 49, Western India House, Sir P.M. Road, Bombay.
- \*30. Premier Chromate & Chemical Works Ltd., 402, Cadell Road, Bombay.
- \*31. Pioneer Chromate Works, Ltd., P.B. No. 759, Bombay.
32. Progressive Chemical Corporation, 51, Esplanade Road, Bombay.
33. Phoenix Chemical Works, 74 Chinchpokly Road, Bombay.
34. Rhotas Industries Ltd., Dalmianagar.
- \*35. Seraikella Glass Works, Kondra, Dist. Singhbhum.
- \*36. Star Paper Mills, Ltd., Russa Road, Calcutta 1.
37. Sardesai Brothers Ltd., Biliunora.
- .38. Travancore Ogale Glass Mfg. Co. Ltd., P.O. Udyogmandal, Via Alwaye.
- \*39. Taj Glass Works, Taj Building, Abid Road, Hyderabad.
- \*40. Titaghur Paper Mills Co. Ltd., Chartered Bank Building, Calcutta.
- \*41. Traders Ltd., 15[A], Elphinstone Circle, Bombay.
- \*42. Tex Cheme Corporation, Reid Road, Railwaypura, P.O. Ahmedabad.
- \*43. Trivedi & Co., Katchery Road, Jodhpur.
44. Universal Commercial Corporation, 52, Hormusjee St., Colaba, Bombay.

Besides the above, memoranda were also received from:—

1. Council of Scientific and Industrial Research, P Block, Raisina Road, New Delhi.
2. All India Manufacturers' Organisation, Industrial Assurance Bldg., Churchgate, Bombay.

## APPENDIX II [Vide paragraph 3(c)]

*List of persons who attended the public inquiry on the 26th July, 1949 and who were examined by the Board.*

*Producers—*

Mr. J. D. Choksi	..	..	representing
Mr. C. R. Rao	..	..	
Mr. S. S. P. Jain	..	..	
Mr. G. P. Parikh	..	..	"

Tata Chemicals Ltd., Bombay House,  
Bruce St., Bombay.

Dhrangadhra Chemicals Works Ltd.,  
Dhrangadhra (Saurashtra).

*Importers—*

Mr. W. E. Wilkie-Brown	..	..	"
Dr. R. K. Trivedi	..	..	"
Mr. Keshavlal	..	..	"

Imperial Chemical Industries (India) Ltd., 18 Strand Road, Calcutta.  
Volkart Brothers, Graham Road,  
Ballard Estate, Bombay.  
New Standard Chemical Co. Ltd., 28  
Samuel Street, Vadgadi, Bombay.

*Consumers—*

Mr. Ramanlal Lallubhai	..	..	"
Mr. P. M. Joshi	..	..	"
Mr. Lalbhai Patel	..	..	"
Mr. Purshotamdas Popatlal	..	..	"
Mr. M. B. Desai	..	..	"
Mr. S. P. Ogale	..	..	
Mr. G. H. Patwardhan	..	..	
Mr. P. S. Padhye	..	..	
Mr. M. M. Kohli	..	..	
Mr. S. K. Gupta	..	..	
Mr. H. C. Gupta	..	..	
Mr. D. L. Kunte	..	..	"
Mr. G. M. Sane	..	..	
Mr. N. H. Bhide	..	..	

Ahmedabad Millowners' Association,  
Ahmedabad.

Khatau Makanji Spg. & Wvg. Co. Ltd.,  
Laxmi Building, Ballard Estate,  
Bombay.

All India Bichromate Manufacturers'  
Association, Currimbhoy House, Out-  
ram Road, Bombay, and  
Premier Chromate & Chemical Works  
Ltd., 402, Cadell Road, Bombay.

Pioneer Chromate Works Ltd., P. B.  
No. 795, Bombay.

Kesar Sugar Works, Ltd., 45-47, Apollo  
St., Fort, Bombay.

Ogale Glass Works Ltd., Ogalewadi  
(Distt. Satara).

Western India Glass Manufacturers'  
Association, C/o Ogale Glass Works,  
Ogalewadi (Distt. Satara).

APPENDIX II—*contd.*

<i>Consumers—contd.</i>			
Mr. C. U. Padia	..	..	representing Garment Clearing Works, Gowalia Tank Road, Bombay.
<i>Officials and Others—</i>			
Mr. N. G. Mitra	—	—	.. Deputy Development Officer, Directorate General of Industries & Supplies, New Delhi.
Dr. M. R. Mandlekar	..	..	Industrial Chemist, Office of the Director of Industries, Old Custom House Yard, Bombay.
Hon'ble Mr. M. M. Shah	..	..	Minister, United States of Saurashtra, Rajkot.
Mr. M. Bhatnagar	..	..	Controller of Civil Supplies, United State of Saurashtra, Rajkot.



**APPENDIX III [Vide paragraph 10(a)].**

**(a) Statement showing imports of soda ash (by quantity), since 1936-37.**

Country.	1936-37	1937-38	1938-39	1939-40	1940-41	1941-42	1942-43	1943-44	1944-45	1945-46	1946-47	1947-48	1948-49	April 1949
	Tons													
U. K. including Channel Islands	63,311	65,789	56,985	72,492	73,767	54,279	42,222	20,782	44,830	45,921	29,298	20,569	47,661	2,100
Kenya Colony	..	..	55,751	5,362	6,501	9,671	19,291	24,286	30,016	33,040	32,422	28,584	44,840	37,655
Union of South Africa	..	..	..	..	..	..	..	8	2	..	1,000	..	..	..
Other British Possessions	..	67	69	43	74	12	8	39	1	..	..	..	..	..
Japan	..	..	2,966	1,467	..	84	..	..	..	..	..	..	..	..
China	..	..	..	..	125	376	88	..	..	..	..	..	..	..
U. S. A.	..	..	..	2,621	1,301	2,917	1,504	17	..	..	..	..	..	1,182
Other Foreign Countries	..	..	17	4	3	10	16	..	..	..	..	..	..	..
Foreign Countries	..	..	..	..	..	..	..	19*	2*	..	3*	1*	2,659*	77,278
Total	..	62,632	74,381	65,425	81,050	83,571	73,605	56,561	50,799	78,873	78,344	57,883	67,948	162,594
														3,787

Note.—\*From 1941-42 imports from Japan, China and U.S.A. are not shown separately in the Annual Sea-borne Trade Accounts, but are put together under "Foreign Countries".

APPENDIX III—contd.

(b) Statement showing imports of soda ash (by value) since 1936-37.

Countries.	1936-37	1937-38	1938-39	1939-40	1940-41	1941-42	1942-43	1943-44	1944-45	1945-46	1946-47	1947-48	1948-49
	Rs.	Rs.	Rs.	Rs.	Rs.								
U. K. including Channel Is. lands.	44,01,976	52,84,474	52,84,928	69,54,948	79,05,731	59,37,080	63,25,247	32,65,676	74,50,551	71,10,502	46,89,540	42,79,426	155,27,436
Kenya Colony ..	3,25,586	4,66,624	5,18,638	6,64,117	11,16,160	21,38,392	31,86,171	43,18,491	46,93,746	45,06,655	40,92,634	77,93,115	110,42,981
Union of South Africa.	..	..	..	..	..	..	854	217	..	1,35,593	35	..	..
Other Br. Poses- sions.	2,062	3,984	3,152	6,012	885	832	2,777	157	..	..	31	..	..
Japan ..	1,81,002	88,636	46	9,598	116	..	..	..	..	..	..	..	..
China ..	..	..	10,320	37,233	9,970	..	..	..	..	..	..	..	..
U. S. A. ..	1,73,571	1,12,817	2,69,437	1,42,639	2,531	..	..	..	..	..	..	..	..
Other foreign countries.	3,628	1,524	1,242	2,016	1,032	..	..	..	..	..	..	..	..
Foreign countries	..	..	..	..	..	2,903*	751*	65*	872*	738*	851*	11,99,417*	268,18,599*
To ..	50,89,473	59,58,039	60,87,763	78,16,453	90,36,425	80,79,921	9,615,163	75,84,389	122,80,762	116,17,931	87,82,425	132,74,958	531,89,007

Note.—\*From 1941-42, imports from Japan, China and U.S.A. are not shown separately in the Annual Sea-borne Trade Accounts, but are put together under "Foreign Countries".

APPENDIX IV (Vide paragraph 12).

Statement showing c.i.f. prices and landed costs of soda ash per cwt. imported into India.

Serial No.	Source of information.	Specification.	Date of import.	Origin of import.	c. i. f. Price.	Customs duty.	Landing and Clearing charges	Total landed Cost
					Rs. A. P.		Rs. A. P.	Rs. A. P.
1	Collector of Customs, Madras	Light ..	7-10-48	East Africa..	11 5 10	..	..	13 5 11
2	Ditto ..	Light ..	19-11-48	Italy ..	13 8 9	..	..	17 0 2
3	Ditto ..	Light ..	5-4-49	U. K. ..	11 9 0	..	..	15 0 6
4	Ditto ..	Light ..	2-5-49	U.S.A. ..	13 13 0	..	..	15 12 10
5	Collector of Customs, Calcutta	Light ..	10-5-49	U.S.A. ..	12 5 3	..	..	16 11 4
6	Ditto ..	Light ..	16-5-49	U. K. ..	8 5 4	..	..	12 8 6
7	Ditto ..	Light ..	20-5-49	U.S.A. ..	10 4 8	..	..	14 9 4
8	Ditto ..	Magadi ..	20-5-49	Kenya ..	11 6 9	..	..	14 4 2
9	Ditto ..	Light ..	8-6-49	U.S.A. ..	10 9 1	..	..	14 14 0
10	Collector of Customs, Bombay	Light ..	May, 1949	U. K. ..	8 11 2	3 9 7	..	12 4 9
11	Ditto ..	Dense ..	May, 1949	U. K. ..	8 7 5	3 9 7	..	12 1 0
12	I. C. I. Ltd., Calcutta ..	Light ..	Present ..	U. K. ..	8 10 3	3 9 7	0 8 0	12 11 10
13	Ditto ..	Heavy ..	Present ..	U. K. ..	8 6 6	3 9 7	0 12 10	12 8 1

## APPENDIX V [Vide paragraph 17(d)]

Statement showing c.i.f. prices of different varieties of Soda Ash imported from the United Kingdom and from Magadi (East Africa) during the period from 1st January 1946, to 1st April, 1949.

	From U. K.			From East Africa
	Light Ash.	Heavy Ash.	Magadi Ash.	
		Rs. A. P.	Rs. A. P.	Rs. A. P.
1-1-46	.. .. ..	5 15 4	5 12 9	5 5 4
1-1-47	.. .. ..	6 10 2	6 5 0	..
12-5-47	.. .. ..	7 15 8	7 11 10	..
13-6-47	.. .. ..	7 15 8	7 11 10	6 10 8
1-1-48	.. .. ..	9 10 2	9 6 5	..
8-3-48	.. .. ..	12 15 6	12 12 0	..
19-3-48	.. .. ..	..	..	11 6 0
19-4-48	.. .. ..	12 15 6	12 12 0	13 0 0
10-5-48	.. .. ..	12 15 6	12 12 0	11 6 0
1-1-49	.. .. ..	11 10 4	11 6 8	9 14 5
24-2-49	.. .. ..	10 5 0	10 1 5	9 14 5
4-3-49	.. .. ..	10 5 0	10 1 5	9 12 10
1-4-49	.. .. ..	8 10 0	8 6 3	8 0 0